

### REMARKS

Claims 8-17 have been withdrawn, and claim 18 has been canceled. Claims 1-7 are presented for examination.

As amended, the claims cover a lithium electrochemical cell that contains between about 100 and 1500 ppm by weight of sodium. As described in Applicants' specification, a cell having low sodium content can have good capacity, after production and/or after storage for extended periods of time. The sodium content can be controlled by controlling the manufacture of the cell. As explained in Applicants' specification (paragraph 0024), sodium can be introduced into a cell, e.g., as a trace element, during manufacture and washing of the cell. Sodium can also be introduced into a cell where electrolytic manganese dioxide (EMD) is used in a cathode that is subsequently washed or neutralized with a sodium-containing agent. Additionally, cell components such as an anode and a separator can include sodium, for example, unless specified to be free of sodium.

The Examiner has rejected the claims under 35 U.S.C. § 102(e) as anticipated by U.S. Patent Publication No. 2002/0113622 to Blasi *et al.* or U.S. Patent Publication No. 2003/0186110 to Sloop, and under 35 U.S.C. § 102(b) as anticipated by U.S. Patent No. 5,554,462 to Flandrois *et al.*.

A reference can anticipate a claim expressly or inherently. Here, the Examiner has acknowledged that the cited references do not expressly anticipate the pending claims. (See, e.g., Office Action, p. 7, section 7 "...the prior art fails to disclose the specific sodium content or the absence of sodium in the electrochemical cell...".)

Instead, the Examiner has relied on the doctrine of inherent anticipation to reject the claims:

*It is noted that in the absence of any electrochemical cell component/feature derived from and/or containing sodium (Na), the electrochemical cell must exhibit zero content of sodium (Na), that is to say, no sodium (Na) content at all. Thus, if both the active materials as well as suitable salts are selected from any material and/or salt except sodium (Na), the sodium (Na) content*

*in the cell will be reduced to less than 600 ppm by weight. Thus, the sodium (Na) content is an inherent characteristic and/or property. (See Office Action, p. 3, section 3; p. 4, section 4; and p. 5, section 5, emphasis in the original.)*

But to establish inherent anticipation, “the extrinsic evidence must make clear that the missing descriptive matter is necessarily present in the thing described in the reference, and that it would be so recognized by persons of ordinary skill.” (See M.P.E.P. § 2112 IV. Quoting *In re* Robertson, 169 F.3d 743, 745, emphasis added.) The Examiner must provide a basis in fact and/or technical reasoning to reasonably support the determination that the allegedly inherent characteristic necessarily flows from the teachings of the applied prior art. (See M.P.E.P. § 2112, citing *Ex parte Levy*, 17 USPQ2d 1461, 1464 (1990), emphasis added.) Here, there is no indication that the disclosures of the cited references would necessarily lead to a cell having the claimed sodium content.

The Examiner has reasoned that since the cited references do not disclose any electrochemical cell component/feature derived from and/or containing sodium, then the electrochemical cell must contain no sodium content at all, but this reasoning is flawed. Applicants agree that the cited references do not disclose an electrochemical cell component or feature containing sodium, but the logical inference is that the cell has an unknown sodium content. It does not necessarily flow that because the references are silent on the sodium content of their cells, that the cells have no sodium; the cells could have a sodium content higher than the claimed sodium content. And since the sodium contents are unknown, it does not necessarily follow that the cells of the cited references would have any particular sodium content, let alone the claimed sodium content.

Regardless, this issue is moot in light of the above amendments in which the claims recite an electrochemical cell containing between about 100 and 1500 ppm by weight of sodium. Even assuming, but not conceding, that the cited references somehow suggest a cell containing no sodium at all, the references do not disclose or suggest the claimed sodium content.

For example, none of the cited references recognizes that the sodium content of a cell is either important or affects the performance of the cell. There is no indication in the references

that the cell should be manufactured and/or handled in a certain way to provide the claimed sodium content. There is also no indication in any of the cited references of where the cell components were purchased or whether they were provided to have a low sodium content. All of these factors can result in a cell having a sodium content outside the claimed sodium content. In fact, absent a recognition of the desirability of having a low sodium content or a clear specification of the desired sodium content, a cell would typically result in a cell having a sodium content greater than 1500 ppm. Applicants are submitting with this Reply a declaration under 37 CFR § 1.132 of Michael Pozin, one of the named inventors, in support of these positions. For example, as stated in the declaration, commercially available components of a cell are available having varied sodium content. (See Declaration, p.2, paragraph 6.) Accordingly, unless the components are specifically obtained or expressly specified to have a low sodium content, the sodium content of a lithium electrochemical cell components typically would result in a cell having a sodium content of greater than 1500 ppm.

The Examiner has conclusorily asserted that he has “a reasonable basis to suspect that the claimed electrochemical cell and the prior art’s electrochemical cell would be substantially the same.” (See Office Action p. 7, section 7.) But the Examiner has not articulated the basis for this assertion, so Applicants request that the Examiner provide this basis so that it can be addressed. Otherwise, Applicants submit that the Examiner has not provided a basis in fact and/or technical reasoning to reasonably support the determination that the cited references inherently anticipate the claims.

Moreover, Applicants disagree with the Examiner’s characterization of Applicants’ earlier argument. The Examiner has asserted that Applicants argued that, “any article or product (i.e. the electrochemical) positively include an element/component unless specified to be free of an element substance (i.e. sodium).” (See Office Action, p. 6, section 7.) However, Applicants did not argue that any article would include an element unless specified to be free of that element. Instead, Applicants argued that in the case of sodium content in an electrochemical cell, it cannot be determined whether the electrochemical cells of the cited references have a

sodium content as covered by the claims, and therefore the cited references cannot anticipate the pending claims.

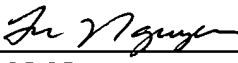
Thus, since it does not necessarily flow that the references disclose cells having the claimed range of sodium content, they do not anticipate the claims.

Applicants believe that the claims are in condition for allowance, which action is requested. Upon allowance of the claims, Applicants request reconsideration of claims 8-17, which can be rewritten to depend from generic claim 1. Claims 8-17 are patentable over the cited references for at least the same reasons that the claim 1 is patentable.

Enclosed is a check for the Petition for Extension of Time fee. Please apply any other charges or credits to deposit account 06-1050.

Respectfully submitted,

Date: November 29, 2004

  
\_\_\_\_\_  
Tu N. Nguyen  
Reg. No. 42,934

Fish & Richardson P.C.  
225 Franklin Street  
Boston, MA 02110-2804  
Telephone: (617) 542-5070  
Facsimile: (617) 542-8906